REMARKS

Consideration of the Application in view of the above amendment is respectfully requested. In view of previous prosecution on the parent case, Applicant offers the following comments regarding the claims and the Affidavit from Dr. Miedaner.

The method includes measuring a first wort outflow rate, selecting a predetermined second and increased outflow rate different from the first wort outflow rate, selecting a predetermined time interval for reaching the second outflow rate, determining the incremental outflow rate increase per unit time corresponding to such change in outflow rate in such time interval and using a value corresponding to the incremental outflow rate increase per unit of time as a set point for the control means for controlling the wort outflow. Accordingly, the method regulates the wort outflow so that, starting from a first outflow rate, a second outflow value is reached within a predetermined time. Independent claim 20 and the dependent claims thereof are directed toward a device for carrying out the novel method.

Applicants submit herewith an affidavit from Professor Dr.-Ing. Heinz Miedaner, Director of the State Testing and Research Institute for Brewing Technology, Munich-Weihenstephan. Dr. Miedaner is an expert in the field of brewing technology and has examined U.S. Patent Application No. 08/914,346 in view of the Examiner's outstanding objections. Dr. Miedaner's responsibilities include preparing analyses of orders, expert opinions and technical and technological acceptance documents for brewing and beverage plants. It is Dr. Miedaner's testimony via Affidavit that the development of applicant's control program, namely "trending," for which this patent was applied, has succeeded in increasing the production of brewing plants from lautering 6-8 brews per day to lautering 10-12 brews per day. Dr. Miedaner states that the increased production produces a quality that is at least as good with respect to yields, haze values, etc. as previous processes. Additionally, and as confirmed by Dr. Miedaner, it is now possible to produce wort in an existing brewery with existing equipment and devices at an increased production and thus in a more economic manner. Dr. Miedaner refers to the increased production as an "outstanding development." The unexpected result of an increase in production from applicants' control program may provide an increase of up to double the production capacity, namely, from 6 brews per day to 12 brews per day.

Applicant's undersigned attorney expresses her willingness to engage in a telephone conference with the Examiner to advance the status of the case.

Respectfully submitted,

Kurt Stippler et al.

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

Amend the specification by inserting a new section before the "Description" as follows:

CROSS-REFERENCE TO RELATED APPLICATION

This application is a continuation of pending United States Patent Application No. 08/914,346, filed August 15, 1997.

In the Claims:

Claims 1-11 have been canceled.

Claims 12-25 have been added.

12. (New) A method for controlling a wort outflow from a lauter tun during a brewing process, the lauter tun having wort therein, the lauter tun having an outflow pipe connected thereto for conveying the wort from the lauter tun at an outflow rate, and the lauter tun having an outflow regulator adapted to control the wort outflow, comprising the steps of:

measuring a first wort outflow rate;

selecting a predetermined second and increased outflow rate different from the first;

selecting a predetermined time interval for reaching the second outflow rate;

determining the incremental outflow rate increase per unit time corresponding to such change in outflow rate in such time interval; and

using a value corresponding to the incremental outflow rate increase per unit of time as a set point for the control means for controlling the wort outflow.

13. (New) The method according to claim 12 wherein a regulating valve defines a flow opening that the wort outflow passes through, and the step of using a value corresponding to the incremental outflow rate increase per unit of time includes varying the flow opening of the regulating valve.

14. (New) The method according to claim 12 wherein the lauter tun has a regulating valve positionable to a plurality of opening angles to regulate the wort outflow rate, and further including the step of regulating the regulating valve to move the regulating valve to a selected one of the opening angles and thereby regulating the wort outflow rate thereby using the regulating valve as the outflow regulator.

15. (New) The method according to claim 12 wherein the lauter tun has a grain bed therein and a raking device is provided in the lauter tun, the raking device being adjustable vertically relative to the grain bed, and the method includes the step of adjusting the raking device vertically to increase the wort outflow rate toward the second outflow value.

16. (New) The method according to claim 12 wherein at least one phase of the brewing process is a trending phase, the method includes the step of monitoring the first wort outflow rate as the first wort outflow rate is increasing toward the second outflow value and varying the second outflow value from an original value during the trending phase if a rate of increase in the wort outflow rate is less than the outflow rate increase per unit time by a predetermined amount.

17. (New) The method according to claim 16 wherein the second outflow value is reduced if a selected increase flow rate of the wort is not reached in the course of the trending phase.

18. (New) The method according to claim 16 wherein the second outflow value is reduced from the original value.

19. (New) The method according to claim 18 wherein the second outflow is increased to the original value after the second outflow value has been reduced, if the rate of increase in the wort outflow rate of the wort is constant over a predetermined period.

20. (New) A device for brewing and controlling a wort outflow from the brewing device, comprising:

a lauter tun;

a discharge pipe connected to said lauter tun for carrying said wort away from the lauter tun;

a flow meter connected thereto, the flow meter being positioned to measure wort outflow;

an outflow regulator coupled thereto for controlling the flow of wort from the lauter tun through the discharge pipe; and

a discharge control connected to the outflow regulator and to receive the outflow values from the flow meter, the discharge control being configured to provide control signals for controlling the outflow using a value corresponding to an incremental outflow rate per unit of time as a set point, such incremental outflow rated based on a first wort outflow rate measured by the flow meter, a selected predetermined second and increased outflow rate different from the first, and a selected predetermined interval for reaching the second outflow rate.

21. (New) The device according to claim 20 wherein said outflow regulator is a lauter flap.

22. (New) The device according to claim 20 wherein said outflow regulator is a regulating valve.

23. (New) The device according to claim 20 further including a raking device arranged in the lauter tun and vertically movable relative to the lauter tun.

24. (New) The device according to claim 23 wherein the lauter tun has a grain bed therein and the raking device is provided in the lauter tun, the raking device being adjustable vertically relative to the grain bed, and the discharge control actuates the raking device vertically to increase the wort outflow rate toward the second outflow value.

25. (New) A method for controlling a wort outflow from a lauter tun during a brewing process comprising:

comparing a first outflow quantity to a desired second outflow value to determine a desired increase or decrease in outflow quantity;

selecting a time interval during which the desired increase or decrease will be effected;

calculating a flow rate per unit time increase or decrease based on the desired increase or decrease in outflow quantity divided by the selected time interval; and

using the flow rate per unit time as a set point for increasing or decreasing the flow rate such that the desired outflow value is attained during the time interval.

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